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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,632

10/31/2005

Jeong-Il Seo

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6223

8791

7590

07/26/2007

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EXAMINER

LEE, PING

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

07/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,632	Applicant(s) SEO ET AL.	
	Examiner Ping Lee	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The amendment filed 6/7/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: on p. 1 under the Technical Field, it is said that the present relates to a method for processing a three-dimensional audio scene having sound source whose spatiality is extended and a method for processing a three-dimensional audio scene to extend the spatiality of sound source in a three-dimensional audio scene. These methods are not supported by the specification as originally filed. On p. 11, lines 24-32, it is unclear what AudioFX node is. On p. 12, lines 17-18, the original specification fails to indicate that Fig. 2 is a diagram depicting a scene of Audio BIFS.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Padula (US006330486B1).

Regarding claims 1, 5 and 9, Padula discloses a method for generating a three-dimensional audio scene (col. 3, lines 31-33) with a sound source whose spatiality is extended (since sound source is movable, the effect of the sound source is spread to other location), comprising the steps of:

a) generating a sound object (72); and

b) generating three-dimensional (73-79) audio scene description information including sound source characteristics information for the sound object,

wherein the sound source characteristics information includes spatiality extension information of the sound source, said spatiality extension information (col. 5, lines 36-39) enabling the sound source to include more than one dimension (this feature is inherently provided; for a sound source with a size and shape more than a single dot in a space, the sound source includes more than one dimension; since Padula discloses that the sound source has size and shape, so the sound source in Padula is not a single dot in the audio scene, and includes more than one dimension), and includes the size and shape the sound source expressed in a three-dimensional space (col. 3, lines 46-49).

Regarding claims 2, 6, 10, 13, 14 and 15, Padula shows that the spatiality extension information of the sound source includes sound source dimension information that expressed as three components, including an x-component, a y-component and a z-component, of a set of three-dimensional coordinates (col. 7, lines 61-62).

Regarding claims 3, 7 and 11, the claimed geometrical center location information of the sound source dimension information reads on the location defined by x, y, z coordinates or polar coordinates.

Regarding claims 4, 8 and 12, Padula shows that the spatiality extension information of sound source further includes direction information of the sound source (col. 1, line 58) and describes a three-dimensional audio scene by extending the spatiality of the sound source in a direction vertical to the direction of the sound source (as explained above, since the sound source is not a single dot in space, it has a dimension vertical to the direction of the source).

Response to Arguments

4. Applicant's arguments filed 6/7/07 have been fully considered but they are not persuasive.

On p. 6, applicant argued that Padula does not mention that any size or shape expressed in three dimensions. This is not persuasive. Fig. 5 of Padula clearly shows a possible audio scene in a three-dimensional space. Since the source is to be located in the scene, its size and the shape are expressed in the three-dimensional space.

On p. 6, applicant further argued that Padula does not disclose "sound source characteristics information including spatiality extension information enabling the sound source to include more than one dimension" as recited in claim 1. Again, this is not persuasive. Unless the source is a point source, any moving source having a defined size and shape (Padula discloses these) has more than one dimension. Furthermore,

any source that is moved would provide an effect to more than one dimension in a virtual three-dimensional space as simulated in Padula.

From the end of p. 6 to p. 7, applicant argued that Padula teaches how to warp the audio scene, Padula does not disclose that the source of that sound is enabled to be spatially extended, or of more than one dimension. A spatially extended sound source would also include a size and shape of more than one dimension, which is also not disclosed in the reference. First of all, it is irrelevant that Padula discloses more features than the claimed invention of the present invention. Padula discloses that the sound source is moveable in a three-dimensional space. A moveable sound source would extend its spatiality in three-dimensional space. A moving direction in a virtual three-dimensional space is defined in more than one dimension. For example, with the source located at x_1, y_1, z_1 , the moving direction cannot be defined in one dimension. It simply would not make any sense. Any object with a defined size and shape in a real world has more than one dimension. For example, a car has a size (length, width and height) and shape (rounded top, flat left, flat right, rounded front and back) in more than one dimension. Padula discloses that a sound source is to be simulated in a virtual world with a three-dimensional space. For example, a moving car is to be simulated in a virtual world. The simulated moving car would have a size and shape with more than one dimension.

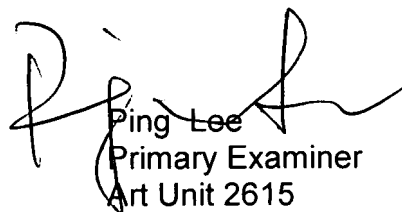
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522.

The examiner can normally be reached on Monday, Wednesday and Friday.

Art Unit: 2615

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ping Lee
Primary Examiner
Art Unit 2615

pwl